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NASA's new FY 2001 budget tops $14B; Stennis will benefit

On Oct. 27, President Clinton signed the FY 2001 VA/HUD/Independent Agencies Appropriations bill, which includes $14.28 billion for NASA. This represents an increase of $250 million above the president's original budget request for NASA and $633 million more than the Agency's FY 2000 funding level.

NASA Administrator Dan Goldin expressed appreciation of the efforts of key members of the House and Senate and the support of the Administration.

"Congress has recognized that the revolution has taken hold at NASA, and that the Agency's 'faster, better, cheaper' way of doing business has allowed us to do more for less," noted Goldin. "This budget is a tribute to NASA's performance."

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NASA Administrator Dan Goldin, left, admires a memento presented to him by Louisiana Gov. M.J. "Mike" Foster at the first Louisiana Research and Technology Summit held Oct. 23 at the Pennington Biomedical Research Center in Baton Rouge. The summit was co-sponsored by NASA and the state of Louisiana and featured a full day of information exchange sessions among NASA, resident agencies at Stennis Space Center, Louisiana universities and industry specialists. See story on Page 5.

NASA astronaut Michael Fossum, right, demonstrated to more than 1,500 Boy Scouts camping on the grounds of John C. Stennis Space Center, above, in the 2000 Scout-O-Ree Oct. 28, that inside this astronaut there is a scout. Fossum wore his Boy Scout uniform under his NASA jumpsuit. Stennis hosted two major scouting events in October. More than 1,500 Girl Scouts in grades K-12 from Mississippi and Louisiana participated in "On Time 2000" Jamboree on Saturday, Oct. 14 at Stennis. For some sights from the Boy and Girl Scouts' events, see photos on Page 6.

Director's Dialogue

from Center Director
Roy Estess

Growing Pains

Our unique federal city continues to evolve as we welcome new agencies, companies and groups to our Stennis Space Center family and as we see the tremendous growth being experienced by our existing tenants.

For FY 2001, we will receive $50 million in construction for Stennis Space Center that will allow us to make many enhancements to our test facilities. Of this, $15 million will be used to start a facility to test the Rocket-Based Combined Cycle Engine, the new propulsion system for the future that is designed ultimately to lower the cost of getting into space.

Recently, we celebrated the groundbreaking ceremony for construction valued at $25 million in facilities to support the Department of Defense's Naval Small Craft Instruction and Technical Training School (NAVSCIATTS) and Special Boat Unit TWENTY-TWO (SBU-22). The co-location of these units serves to strengthen their missions through shared resources, facilities and technical capabilities.

In September, we also welcomed Lockheed Martin Corporation's advanced Propulsion, Thermal and Metrology Center to Stennis. This effort resulted from collaboration among Lockheed Martin, the state of Mississippi, Hancock County and NASA and will bring an additional 270 jobs to south Mississippi. Lockheed's new endeavor changes the complexion of Stennis. In cooperation with the state of Mississippi, we are actually building a high-tech industrial park on federal property.

Last month, we saw our technology incubator graduate several companies to begin doing business on their own. And, later this month, the Navy — our largest resident agency at Stennis — will move its offices into the newly completed wing of our administrative building.

Stennis Space Center continues to grow beyond any vision we could have ever imagined. With growth come new and different challenges and requirements for all of us. Currently, the replacement value of Stennis Space Center is approximately $2 billion. However, one cannot place a value on the number of lives touched daily by the valued programs and missions of our resident agencies.

Our facility and the many employees who work here can be proud of our growth and prosperity. They can be equally as proud of the important work they do for our country and how we contribute to the quality of life for ourselves and our surrounding communities.

Thank you for your continued hard work and dedication as you step up to the challenges we may face during this period of growth and change.

NEWSCLIPS

Sightings from Stennis — Those interested in opportunities to view, without the aid of a telescope, the International Space Station, the Space Shuttle and other spacecraft as they pass overhead in relationship to Stennis Space Center now have a tool available to assist them — NASA's Human Spaceflight Web site at *http://spaceflight.nasa.gov/index.html*. Select "Realtime Data" and click "Sighting Opportunities." Then select either text-based sighting opportunities or use the Sky Watch Java applet.

NASA outlines Mars exploration program for next 20 years — By means of orbiters, landers, rovers and sample return missions, NASA's revamped campaign to explore Mars is poised to unravel the secrets of the Red Planet. Six major missions are planned in this decade as part of a scientific tapestry that will weave a tale of new understanding of Earth's sometimes enigmatic and surprising neighbor. In the second decade, NASA plans additional science orbiters, rovers and landers, and the first mission to return the most promising Martian samples to Earth. Technology development for advanced capabilities such as miniaturized surface science instruments and deep drilling to several hundred feet will also be carried out.

Cassini captures changes on Jupiter — New images of Jupiter taken by NASA's Cassini spacecraft show the changing face of the planet as it completes a full rotation in about 10 hours. Cassini will pass most closely to Jupiter — about 6 million miles away — on Dec. 30. Images captured will be used for studies of atmospheric dynamics, dark rings and other features of Jupiter. Cassini is passing Jupiter on its way to its ultimate destination — Saturn. The images are available from NASA's Jet Propulsion Laboratory in Pasadena, Calif., at *http://www.jpl.nasa.gov/pictures/jupiter*.

3-man crew arrives at ISS, begins busy schedule of duties

The ISS Expedition 1 crew takes a break from training in the systems integration facility at the Johnson Space Center for a crew photo. From the left are cosmonaut Sergei Krikalev, flight engineer; astronaut Bill Shepherd, Expedition commander; and cosmonaut Yuri Gidzenko, Soyuz commander.

Following a launch atop a 162-foot-tall Soyuz™ rocket at 1:53 a.m. CST Oct. 31 from Baikonur Cosmodrome in Kazakhstan, Russia, the first residents are now on board the International Space Station (ISS) for a four-month stay.

The crew includes an American astronaut, Expedition Commander Bill Shepherd, and two Russian cosmonauts, Soyuz Commander Yuri Gidzenko and Flight Engineer Sergei Krikalev. They arrived at their new home Nov. 2.

Aboard the station, the crew will help with assembly tasks as new elements, including the U.S. Laboratory, are added to the orbiting outpost. They will also conduct early science experiments.

The ISS is the most ambitious engineering project in world history. The program involves 16 partner countries, including the U.S., Russia, Japan, the 11 members of the European Space Agency and Brazil, who have joined together to build the most capable space laboratory ever constructed.

When complete in 2006, the ISS will be about the size of a three-bedroom house and will be home to up to seven astronauts at a time, who will work on experiments running the gamut of scientific disciplines.

The ISS is orbiting the Earth at an altitude of about 237 statute miles with its systems in good shape.

Members of the Waits family of Lumberton, foreground, were among more than 2,600 visitors who turned out for the second public test firing of a Space Shuttle Main Engine (SSME) at Stennis Space Center on Thursday, Nov. 9. The 300-second flight certification test of the SSME Block II-A configuration, a significantly upgraded engine configuration, featured a Rocketdyne high-pressure fuel turbopump. The engine is scheduled to help power the Space Shuttle Atlantis on its Jan. 18 mission to the International Space Station.

Stennis welcomes Smiles as new chief of the S&MA Office

On Nov. 19, Michael Smiles started his first day as Chief of the Safety and Mission Assurance Office at Stennis Space Center, replacing John Gasery Jr., who retired Oct. 3 after 17 years of service at Stennis.

Mike Smiles

Before arriving at Stennis, Smiles served as Deputy Manager of the Transportation Assurance Department at Marshall Space Flight Center in Huntsville, Ala.

A native of Leeds, Ala., near Birmingham, Smiles graduated in 1974 from the University of Alabama with a bachelor of science degree in mechanical engineering. His first NASA assignment was at the Michoud Assembly Facility Resident Office as a Quality Engineer in 1985 before moving on to Marshall in 1986 where he held a number of increasingly

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CHL a big plus for resident agencies

After nearly a dozen years, the Center of Higher Learning (CHL) at Stennis Space Center remains a leading advantage in Stennis' efforts to attract and retain resident agencies and organizations.

The goal of the center, created in 1989 through an agreement by NASA, the U.S. Navy, and the Mississippi Board of Trustees of State Institutions of Higher Learning, is to coordinate university support at Stennis to provide incentives through education and research programs for agencies to locate and remain at Stennis.

"Currently, we have 10 on-site masters and doctoral programs in engineering, marine science and applied physics through the University of Southern Mississippi, Mississippi State University and the University of New Orleans," Center of Higher Learning Director Jim Meredith said. "These programs provide continuing education and research to meet and anticipate the needs of NASA and its resident agencies."

The Center of Higher Learning, located in Bldg. 1103, employs 29 people with support of five more staff members from the University of Southern Mississippi.

"We work directly with many of the agencies' managers and human resource officers on site, as well as in partnership with state and federal agencies, to develop and implement new instructional technologies, applications and programs that are beneficial at Stennis," CHL Director of Academic Affairs, Training and Outreach Keith Long said. "Through these discussions, we have plans to add masters degree programs in business administration and computer science."

The CHL also provides distance-learning opportunities through their Interactive Video Network classroom and through their relationship with affiliated University distance learning offices.

The Geographic Information Systems (GIS) and Remote Sensing Laboratory is developing a high probability cueing locational computerized system for law

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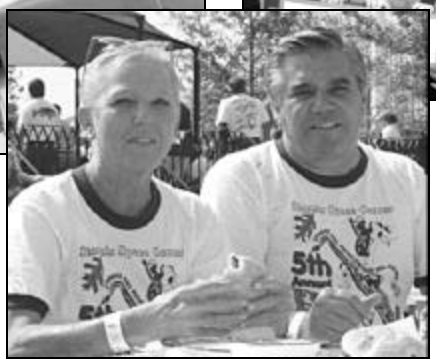
Stennis Fall Family Picnic

More than 2,200 Stennis employees, relatives and friends attended this year's Stennis Fall Family Picnic at the Jazzland Theme Park in New Orleans. Committee members who organized the event included chairwoman Shawn Keller, Mary Byrd, Bo Clarke, Rhonda Foley, Sandy Mitchell, Christine Reynolds, Kern Witcher, Denise Dedeaux, Steve McCord, Michelle Ong, Donna Mills and Juliet Wade. Volunteers included Charlene Guin, Kathy Slade, Sarah Middleton, Diane Johnson and Michael Slade.



Shown at top right, NASA's Shawn Keller displays one of the posters announcing the Fall Family Picnic. Keller chaired the organizing committee. Above, committee members draw names for door prizes. Shown are, from left, Rhonda Foley and her daughter, Aniyah, 7, Charlene Guin and Bo Clarke. Pictured at lower right, Rose Thompson and NASA's Gerry Meeks enjoy lunch.

Busy schedule designing facilities suits Canady just fine

Randy Canady

Stennis Employee Profile

The dry-erase board in Randy Canady's office can hardly hold the list of things to do. One glance and you can tell his days are full.

Canady is an experimental facilities development engineer responsible for planning with the Construction of Facilities program for NASA's Center Operations and Support Directorate at Stennis. Canady is primarily involved with design and construction activities.

These days, Canady spends a lot of his time with another Stennis expansion project. He is involved with the design of the new E-4 test stand at the E complex, where the Rocket Based Combined Cycle (RBCC) engine will be tested.

RBCC is the engine for a next generation vehicle called ISTAR (Integrated System Test of Air Breathing Rocket).

The stand will be built just north of the existing stands in the E complex.

"This engine is a unique configuration. It involves a transition from rocket engines to air-breathing engines, from rocket engines to Ramjet and Scramjet," he said.

Although his design and planning projects take up most of his time, Canady also finds time to be a member of the Rocket Propulsion Test Management Board and the Configuration Review Board.

It makes for a hectic routine, especially his projects for the Facilities Engineering Division, but that's OK with Canady.

"I enjoy this. It's challenging," he said. "It's got all the elements that a mechanical engineer dreams about. I can't think of anything right now that I'd rather do."

Canady began at Stennis 12 years ago. When he started in 1988, he was in charge of the Diagnostics Test Facility. He then made a transition to the Component Test Facility where he was the construction manager from 1989 until the mid-'90s. That's when he moved into the Facilities Engineering Division.

Previous to his work with the E complex, Canady did a lot of work on the B and A stands. "Basically anything mechanical in the test area, I've delved into one way or another," he said.

Canady also volunteered his time earlier this year to help Gulfport High School's entry in the FIRST Robotics Contest. Canady and other Stennis engineers' effort helped the entry win the regional contest in Houston and advance to the national competition in Orlando, Fla.

Canady's road to Stennis has taken him full circle. His family lived in Ocean Springs when he finished high school and went to college, first at Perkinston Junior College (now Mississippi Gulf Coast Community College) and then at Mississippi State University. In Starkville, he was a co-op student alternating between his studies at MSU and working for the Lockheed Corporation's Marietta, Ga., operation installing new machinery and designing tooling.

After graduating from MSU in 1979, he took a job with Pratt & Whitney in West Palm Beach, Fla., and then in 1981 went to work offshore for Amoco. Canady and his wife Cindy lived in Lafayette, La. Randy was later transferred to the New Orleans office, and the Canadys moved to Slidell.

Cindy, also a mechanical engineer, preceded Randy to Stennis and worked here from 1988 until 1996.

The family moved again in 1996, this time back to Ocean Springs, where Cindy now teaches fourth grade.

The Canadys have been married since 1979. They have two children, Erin, 15, and Russell, 9.

Summit is a success for NASA, Louisiana

More than 400 business and technical professionals attended the first Louisiana Research and Technology Summit Oct. 23 in Baton Rouge. The event was held at the Pennington Biomedical Research Center and was co-sponsored by NASA and the State of Louisiana.

NASA Administrator Dan Goldin reflected on his first encounter with Louisiana Governor M.J. "Mike" Foster and the state's economic development master plan, Louisiana: Vision 2020.

"I was impressed with his business-like attitude," Goldin said. "I come from the private-sector where talk is not what is important. It is results. We felt results were important for the economic renewal and diversification that will move Louisiana industries into the emerging technology areas of impact to the nation and to Louisiana. The targets of Foster's Vision 2020 economic program — medical and biomedical, micromanufacturing, information technologies, environmental technologies, food technologies, and advanced materials — are the exact areas in which NASA is focused. It was clear that this was a magic moment."

The summit, an outcome of that initial meeting, was structured to be a forum to encourage an exchange of information leading to partnerships between NASA and Louisiana businesses and universities.

"Investment in technology is the cornerstone of Vision 2020 because along with

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Stennis Space Center Director Roy Estess talks with NASA Administrator Dan Goldin at the first Louisiana Research and Technology Summit held Oct. 23 in Baton Rouge.

Scouts at Stennis

StenniSphere offers Astro Camp Saturday sessions for children

Children ages 9-12 are invited to spend one Saturday each month at Stennis Space Center for Astro Camp Saturday beginning in January.

Children can come to one, some, or all of the five Saturday sessions at Stennis' visitor center, StenniSphere, and learn space skills such as building a rocket, living in space or exploring Mars.

Sessions are from 9 a.m. to 4 p.m. each Saturday and cover the following topics: Rocketry 101, Jan. 20 and April 21; Star Station One™, Feb. 17 and May 19; and Mission To Mars, March 17.

The first Astro Camp Saturday session will include instruction on how rockets fly and what fuels them. Campers will make their own small-scale rockets and launch them by the end of the day.

Camp size is limited to 25 participants each Saturday, so call early to register.

The cost is $50 a person for each camp. A $20 registration fee for the desired camp will count toward the $50 camp fee.

Upon arrival at the site location, each camper will be briefed about his or her mission.

Included in each camper's mission packet will be a lunch, snacks, camp supplies and ticket for a ride on the motion simulator at StenniSphere.

Call (228) 688-2322 to register or for more information.

Report targets cause of SSME test incident

A detailed review of a Space Shuttle Main Engine (SSME) test mishap June 16 at NASA's Stennis Space Center has revealed that special tape was left behind inside the engine during processing, contaminating the system.

Joseph Rothenberg, NASA Associate Administrator for Space Flight, appointed Robert Sackheim, Assistant Director for Space Propulsion at NASA's Marshall Space Flight Center in Huntsville, Ala., to assess the main engine test mishap. The investigation team found that nearly 24 square inches of tape, routinely used as a temporary closure or protective barrier during main engine processing and assembly, had been inadvertently dropped into the fuel system. Despite normal processing inspections, the tape went

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The measure will fund important activities at Stennis Space Center during fiscal year 2001, according to Stennis Space Center Director Roy Estess. "We are very grateful the bill fully funds the Agency's request of $290 million for the Space Launch Initiative," Estess said. "Funding for this initiative is critical for Stennis' role in developing the nation's new generation of space launch systems. Many of the test activities planned for Stennis in the next several years are tied to this Initiative."

Estess expressed appreciation for efforts by Sen. Thad Cochran, R-Miss., a key member of the Senate Appropriations Committee, and Senate Majority Leader Trent Lott, R-Miss., to ensure funds for this program were included in the final bill.

The bill also includes nearly $500 million to address Space Shuttle safety improvements and upgrades, which will lead to increased Space Shuttle Main Engine testing at Stennis — NASA's Center of Excellence for Rocket Propulsion Testing.

Estess said an additional $28.5 million will be directed toward improving the center's test infrastructure.

"This funding will be used to upgrade test stands and test support facilities, to construct a new propulsion test operations building, and to improve roads leading to the test complex," he said. "These upgrades will support Stennis' ability to ensure that our test infrastructure and capabilities are state-of-the art and maintained in world class condition for both governmental and commercial projects."

The bill also allocates $20 million for NASA to purchase remote sensing data from commercial sources to support Earth science research and applications. As NASA's Lead Center for Remote Sensing Applications, Stennis is responsible for handling commercial data purchases in support of these requirements.

In addition to the annual appropriations bill for NASA, the president on Oct. 30 signed the first NASA authorization bill enacted into law since 1992. The bill authorizes $13.6 billion for FY 2000, $14.2 billion for FY 2001, and $14.6 billion for FY 2002 for NASA's programs.

The president voiced satisfaction with the bill in that it addresses many of the key concerns, including building the International Space Station, improving Space Shuttle safety, reducing the cost of access to space through the new Space Launch Initiative, and investing in outstanding science and technology.

SUMMIT . . .

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education, technology is absolutely key to the future of our state," Foster said. "It is investment in technology that will help us diversify Louisiana's economy, giving us the vital boost needed to grow."

"I feel we made significant strides in reaching our goal of establishing an ongoing line of communication that will lead to future partnerships with NASA and Louisiana's businesses and universities," Stennis Space Center Director Roy Estess said.

Also sponsoring the summit were the Louisiana Department of Economic Development, the Louisiana Board of Regents, the Louisiana Business and Technology Center, the Louisiana Technology Transfer Office and the Pennington Biomedical Research Center.

Stennis makes info on new EMS available

We are rolling out Stennis' ISO14001 Environmental Management System:

ISO14001 — How does your job impact the environment?

ISO14001 — Who is your EMS Installation Representative?

ISO14001 — Read up on it at *http://www.ssc.nasa.gov/environmental/html/iso14001.htm.*

SMILES . . .

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responsible positions.

At Stennis, Smiles will use his "wealth of experience in planning, managing and directing the areas of safety, reliability and quality assurance," said Center Director Roy Estess.

"I look forward to moving to Stennis for the challenge of an exciting, new job and the opportunity to work with a great group of NASA, other government agencies, and contractor folks," Smiles said.

QUICK LOOK

■ **The following will be closed Thursday, Nov. 23 in observance of Thanksgiving:** Keesler Federal Credit Union, Stennis Child Care Development Center, APG Service Station, Dave's Snack Bar, Main Cafeteria, U.S. Post Office, World Wide Travel, Hancock Bank, The Wellness Center, Corporate Cleaners, MSS-InDyne mail services and taxi service, the barber shop, and communications. The Stennis Child Care Development Center will remain closed the day after Thanksgiving, Friday, Nov. 24.

■ **The annual NASA Christmas Dinner Dance** is scheduled from 7-11 p.m. Saturday, Dec. 2 in the Bonfouca Banquet Room at Front Street and Fremoux Avenue in Slidell, La. The Alley Cats will perform. Tickets are $10 per person. The event is open to current and retired NASA employees and their guests. For more information, call Toni Watkins at Ext. 2042.

■ **The annual NASA Director's Christmas Reception** will be from 2-4:30 p.m. Thursday, Dec. 14 at the Rouchon House. The reception is open to current and retired NASA employees and their guests.

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unnoticed before the engine was test fired.

Sackheim's team found the handling of, accounting for, and inspecting for loose materials used to process and rebuild engines during normal operations were inadequate. In addition, his team concluded that the use of tape as a barrier against contamination provides the opportunity for material to be left in an engine.

The Space Shuttle Main Engine project and its prime contractor, the Rocketdyne Propulsion & Power business of The Boeing Company, are working on a plan to address the report's recommendations.

All Space Shuttle Main Engines have been inspected and cleared for flight. No evidence of foreign-object damage or tape was found. The full text of the report can be found at *ftp://ftp.hq.nasa.gov/pub/pao/reports/2000/ssme_vol1.pdf*.

CHL . . .

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enforcement support. The High Performance Computing and Algorithms Laboratory is currently developing algorithms that are coupling oceanographic and atmospheric models for the U.S. Navy. The Visualization Center is building infrastructure for scientific and engineering collaborative ventures with universities, agencies and private industrial partners.

LAGNIAPPE

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